

## Meta-Cognitive Assignment / Programming (202001064)

This assignment was designed as a complementary formative assessment for the students who got an exemption from the weekly sign-off because they obtained the sign-off as a TCS student (confirmed by an email from the responsible lecturer). If you received such an exemption, then this current assignment is mandatory for you (this is a request from the Programme Director that we offer you a replacement assignment for the formative part, i.e., the weekly exercises).

To complete this assignment, visit <https://personal-learning-records.nl> and self-assess your proficiency in each topic of each week (between 1 and 7, included).

### Week 1

Topics / Proficiency Level	Your self-assessment
P.01.01 - Java Syntax Fundamentals	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.01.02 - Variables and Constants in Java	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.01.03 - Conditionals	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.01.04 - Blocks and Subroutines	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.01.05 - Repetition Structures (loops)	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.01.06 - Exception Handling Fundamentals	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target

### Reflection

Please write a reflection with a length of 1-2 paragraphs explaining why you consider yourself in the levels selected above and what your plans are to achieve the Target level in each of them. Finally, add a last sentence explaining the importance of this topic in the Programming Test (you can use one of our diagnostic exams as a reference) and how you plan to pass the test at the 1<sup>st</sup> opportunity

## Week 2

Topics / Proficiency Level	Your self-assessment
P.02.01 - Computer Programming Paradigms	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.02.02 - Object-Oriented Programming (Classes & Objects)	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.02.03 - OOP: Encapsulation and Access Modifiers	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.02.04 - Programming by contract, Preconditions, Postconditions and Invariants	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.02.05 - Testing	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.02.06 - Testing with JUnit	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target

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## Week 3

Topics / Proficiency Level	Your self-assessment
P.03.01 - OOP: Inheritance	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.03.02 - OOP: Polymorphism	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.03.03 - OOP: Abstract class/method, Interface	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.03.04 - OOP: Subtyping and dynamic typecasting	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.03.05 - Security Engineering Fundamentals (theoretical LO)	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.03.06 - Security Design (theoretical LO)	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target

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## Week 4

Topics / Proficiency Level	Your self-assessment
P.04.01 - Arrays & Lists	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.04.02 - Collections: Sets	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.04.03 - Collections: Maps	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.04.04 - Comparison	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target

Please write a reflection with a length of 1-2 paragraphs explaining why you consider yourself in the levels selected above and what your plans are to achieve the Target level in each of them. Finally, add a last sentence explaining the importance of this topic in the Programming Test (you can use one of our diagnostic exams as a reference) and how you plan to pass the test at the 1<sup>st</sup> opportunity

## Week 5

Topics / Proficiency Level	Your self-assessment
P.05.01 - Exceptions in Java	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.05.02 - I/O Streams	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.05.03 - Design Patterns for decoupling	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.05.04 - Security Engineering: Encoding	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.05.05 - Security Engineering: Hash functions	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target

Please write a reflection with a length of 1-2 paragraphs explaining why you consider yourself in the levels selected above and what your plans are to achieve the Target level in each of them. Finally, add a last sentence explaining the importance of this topic in the Programming Test (you can use one of our diagnostic exams as a reference) and how you plan to pass the test at the 1<sup>st</sup> opportunity.

## Week 6

Topics / Proficiency Level	Your self-assessment
P.06.01 - Concurrency: Concepts	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.06.02 - Concurrency implementation with Java: Threads and Runnable	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target

Please write a reflection with a length of 1-2 paragraphs explaining why you consider yourself in the levels selected above and what your plans are to achieve the Target level in each of them. Finally, add a last sentence explaining the importance of this topic in the Programming Test (you can use one of our diagnostic exams as a reference) and how you plan to pass the test at the 1<sup>st</sup> opportunity.

## Week 7

Topics / Proficiency Level	Your self-assessment
P.07.01 - Networking: fundamentals	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.07.02 - Networking with Java: Fundamentals	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target
P.07.03 - Graphical User Interface (GUI) with Java	<input type="checkbox"/> Entry <input type="checkbox"/> Intermediate <input type="checkbox"/> Target

Please write a reflection with a length of 1-2 paragraphs explaining why you consider yourself in the levels selected above and what your plans are to achieve the Target level in each of them. Finally, add a last sentence explaining the importance of this topic in the Programming Test (you can use one of our diagnostic exams as a reference) and how you plan to pass the test at the 1<sup>st</sup> opportunity.